

EXECUTIVE SUMMARY

The goal of *Oral Health U.S., 2002* is to provide an easily accessible compilation of indicators that utilize most recent national data available to describe the current status of oral and craniofacial health. Wherever possible trends in national data are examined. Subsequent volumes of the annual report will allow changes over time to be clearly visualized. The format used emphasizes discrete bullets and graphical presentation. Data tables are gathered in a single section at the end of the report to provide more detailed information.

Organization of *Oral Health U.S., 2002*

The report is divided into 17 sections, encompassing clinical indicators, delivery of services, accessibility to care, the impact of oral diseases, and links to systemic health. Those indicators explicitly discussed in Healthy People 2010 objectives are indicated by an asterisk in the Table of Contents. Technical notes briefly describe the national surveys used as the major data sources. In some cases publications have been used as data sources when they represent rigorous analyses of current national data or when national data are not available. In addition, technical notes also describe the analytic methodology used.

Oral Health Indicators

The first section deals with dental caries, the most common infectious disease of childhood. By their senior year in high school 80% of adolescents in the United States have had at least one carious lesion. Untreated dental caries may result in pain, infection, and potential tooth loss. Among children and adults, a higher percentage of Mexican Americans and non-Hispanic blacks have untreated decay than do non-Hispanic whites. Poverty and lower education levels are also associated with untreated decay.

Section 2 deals with preventive interventions that reduce caries. Fluoride, in the water supply, toothpaste, rinses, and tablets, or applied by a dental professional, has had a major impact on caries. It is estimated that 87% of the U.S. population uses a public water system and 66% of these people receive optimally fluoridated water.

Dental sealants are particularly effective in preventing dental caries on pits and fissures. A higher percentage of non-Hispanic white children and adolescents receive sealants than do either non-Hispanic blacks or Mexican Americans. A higher percentage of children with sealants also come from families with higher incomes. Although the American Dental Association recognized the effectiveness of sealants in the 1970s, the majority of children do not yet receive sealants. The demographic distribution of sealant usage suggests that many of the children most at risk for caries do not get sealants.

Section 3 addresses periodontal disease prevalence and severity. Gingivitis, a mild, reversible form of periodontal disease involving inflammation and bleeding of the gums, is found in 54% of the U.S. population aged 20 years and older. Destructive periodontitis, defined in the Healthy People 2010 objectives as one or more sites with 4 millimeters of loss of attachment, affects approximately 26% of

those 20 years of age or older. Cigarette smoking is a major risk factor. Periodontal disease is also more common in diabetics and in people who are older, male, and non-Hispanic black.

Today most younger people anticipate keeping their teeth into old age. Approximately 30% of the adult U.S. population have not lost any teeth to oral disease. A higher percentage of people who are younger, better educated, have higher incomes, and are non-Hispanic white or Mexican American are in this group (section 4). Twenty-five percent of Americans aged 65 to 74 years are edentulous. Edentulism can have a major influence on quality of life. Its effects can be minimized by the use of well-fitting dentures. Dentures are worn by the vast majority (83%) of individuals who are edentulous in either or both arches.

The relationship between a clinical measure of oral health status and a person's self-perception of health is not always straightforward. Some individuals have low expectations for their oral health and may be, in some sense, satisfied at levels that are not professionally acceptable. A higher percentage of people who are younger, better educated, have never smoked, and live above the poverty line assess their oral health status as good or better. Mexican Americans are less likely than non-Hispanic whites or blacks to assess their oral health status favorably (section 5).

Oral health is also affected by congenital anomalies, infections not associated with dental caries, pain, and craniofacial injuries. These are discussed in sections 9 through 11. Orofacial pain represents approximately 40% of the cost of chronic pain in the United States. Emergency room visits for craniofacial injuries comprise 11.3% percent of all emergency room visits.

Access to oral health care is discussed from several perspectives in section 7. The use of dental services in the United States varies greatly according to sociodemographic factors. However, even when poverty status and dental insurance are accounted for, non-Hispanic blacks and Hispanics are less likely to visit a dentist than are non-Hispanic whites.

Several national surveys provide estimates of the oral health care system use. Recent Medical Expenditure Panel Surveys (MEPS) reported that about 40-45% of the U.S. population visited a dentist in the past year. People who were younger, female, better educated and had a higher income were more likely to have seen a dentist in the past year. A higher percentage of children age 2 to 14 had a dental visit than any other age group.

Preventive services, including examinations, dental prophylaxes, radiographs, fluoride treatments, and restorations, are an important component of oral health care. Data from the 1997 MEPS suggested that a higher percentage of non-Hispanic whites received preventive services than did Hispanics or non-Hispanic blacks. This was true for both poor children and children from higher income families. Poor children were less likely than children from higher income families to receive preventive services.

There are a number of reasons for not seeking dental care. Cost is a major issue for many people. In 1971-1975, 34.1% of the adult U.S. population did not receive care for a dental problem due to cost. These individuals were likely to be older, poorer, and female. The use of dental services is greater among people who have a dentist to whom they usually go. In 1971-1975, 68.4% of adults (25-74 years of age) reported having a personal dentist.

Access to care is also enhanced by adequate dental insurance. In 1997, 56% of adults asked about dental insurance in the Behavioral Risk Factor Surveillance System had some form of dental insurance, compared to 86% who had medical insurance. The percentage of people with dental insurance was higher among those with higher incomes and educational attainment. Non-Hispanic blacks were slightly more likely than non-Hispanic whites to have dental insurance (60.8% vs. 56.4%).

Dental care was primarily paid for out of pocket during the 1960 to 1980 period. However, between 1980 and 1999 private dental insurance coverage increased, so that the amounts paid out of pocket and by private dental insurance were nearly equal. Although public funds used for dental expenses have increased slightly over the past four decades, they are still much lower than expenditures from either private insurance or out of pocket sources.

As of September 2001, only 3 states and the District of Columbia had less than 50% of their population in areas not underserved by dental health professionals (section 16). Besides the District of Columbia, they include California, West Virginia, and Oklahoma.

Healthy People 2010 objectives have identified increasing the numbers of health professionals from underrepresented racial and ethnic groups as an integral part of addressing access to care issues. Data from the American Dental Association Survey Center indicate that in 1995-1997, 2% of dentists were black and 3.5% were Hispanic. In 1996-1998, 16.5% of dentists were female. Most female and minority dentists are under 40 years of age. The percentages of black dental school graduates in 1999 and 2000 were 4.2% and 5.7%, respectively, while 5.0% and 5.3% were Hispanic. These percentages are considerably below the representation of these groups in the general population.

The use of tobacco products (especially cigarette smoking) has been strongly linked to development of numerous oral diseases, including oral and pharyngeal cancers, and periodontal diseases (section 12). In 1999, 34.8% of high school students reported being current smokers compared to 30.5% in 1993. Cigars are currently used by 17.7% of high school students. In 1999, 46.5 million adults in the United States were current smokers, including 25.7% of men and 21.5% of women.

Smokeless tobacco use is also strongly linked to oral soft tissue lesions in both young people and adults. Data from the 1986-1987 National Survey of Oral Health in U.S. School Children indicated that 1.5% of students age 12 to 17 had smokeless tobacco lesions. In NHANES III, 5.3% of adult participants also had smokeless tobacco lesions. The prevalence of these lesions is greatest among those 24-35 years of age. Lesions are found primarily in males. Non-Hispanic whites are about twice as likely to have them than are non-Hispanic blacks.

Tobacco and alcohol use cause approximately 75% of oral and pharyngeal cancers. These cancers, discussed in section 13, represent about 3% of all cancers. Their 5-year survival rate is about 52%, which is one of the lowest for all cancers. Oral cancer therapy is frequently associated with disfigurement, diminished speech fluency, and difficulty in eating and swallowing and results in substantial decreases in quality of life. Oral and pharyngeal cancers are much more frequent in males than in females and in blacks than in whites. They are rarely found in people below 40 years of age. Stage at diagnosis is critical to survival, with 5-year survival rates between 1989 and 1994 of 55% for all stages, 82% for localized, 43% for regional spread, and 21% for individuals whose cancers had distant metastases. Blacks are significantly more likely to be diagnosed with advanced disease than are whites and their 5-year survival rates are much lower. The survival rate is also lower for males and for those with lower education levels.

A screening examination consisting of visual/tactile examination of the mouth and palpation of the tongue, floor of the mouth, and lymph nodes in the neck can detect oral cancer at an earlier stage and lead to increased survival. While the percentage of adults aged 40 and above who were screened in the past year increased between 1992 (7.6%) and 1998 (14.7%), the vast majority of people are not being screened.

Xerostomia, the perception of dry mouth, is discussed in section 14. It affects the ability to chew, swallow, and speak. While there is sometimes no clear relationship between xerostomia and hyposalivation, xerostomia generally occurs when salivation levels are lower than 50% of normal range.

Hyposalivation frequently results in rampant tooth decay and can lead to other oral health problems. There is no national prevalence data on xerostomia although data are currently being collected. Smaller studies show a prevalence rate among older individuals (generally age 65 and older) of about 20%, with estimates ranging between 10% and 40%. Xerostomia is found more frequently in women than in men, and is strongly associated with medication use.

During the last decade the importance of oral health to general health and specific interactions between the oral and craniofacial complex and the rest of the body have become clearer. As an example, the possible role of periodontal disease in a range of conditions including cardiovascular disease and low birth weight has received increased attention. Conversely, many diseases and medications have profound oral effects. Section 15 discusses oral manifestations of systemic diseases and the prevalence of some of these disorders.

Conclusion

Oral Health U.S., 2002 provides a graphic overview of currently available national oral health data. It establishes a baseline that will be used in future reports to track trends, emerging problems, and progress in understanding and treating conditions related to oral health and to monitor reduction in disparities in oral health and access to oral health care.